WHAT IS CLAIMED IS:

1. A method of demodulating a stereo composite signal including a pilot signal, comprising the steps of:

(a) sampling the stereo composite signal at a fixed sampling frequency, thereby obtaining input samples;

(b) processing the input samples to obtain internal samples having variable sampling timings;

(c) generating a reference signal according to the variable sampling timings;

(d) detecting a phase difference between the pilot signal and the reference signal;

(e) varying the variable sampling timings according to the detected phase difference; and

(f) digitally processing the internal samples to obtain stereo audio data.

2. The method of claim 1, wherein said step (b) comprises decimating the input samples with a variable decimation interval, and said step (e) comprises varying the decimation interval.

3. The method of claim 1, wherein said step (b) comprises using filter coefficients to perform an interpolation process on the input samples, the internal samples thus being obtained by interpolation, and said step (e) comprises changing the filter coefficients.

4. The method of claim 3, wherein:

said step (e) further comprises selecting the filter coefficients from a plurality of sets of filter coefficients yielding internal samples interpolated at different temporal distances from a most recent input sample, the plurality of sets including at least a first set of filter coefficients

interpolating an internal sample at a shortest of said temporal distances from the most recent input sample, and a second set of filter coefficients interpolating an internal sample at a longest of said temporal distances from the most recent sample.

5. The method of claim 4, wherein said step (b) further comprises the steps of:

skipping generation of an internal sample for the most recent input sample when the filter coefficients are changed from the first set to the second set; and

generating two internal samples for the most recent input sample, using both the first set of filter coefficients and the second set of filter coefficients, when the filter coefficients are changed from the second set to the first set.

6. The method of claim 4, wherein said step (b) further comprises the step of delaying starting timings of the interpolation process according to said temporal distances from the most recent input sample.

7. The method of claim 1, wherein said step (f) comprises performing an interpolation process on the internal samples, thereby generating the stereo audio data at regular intervals.

8. The method of claim 1, wherein said step (f) comprises generating a pilot replica signal from the internal samples, and subtracting the pilot replica signal from the internal samples, thereby canceling the pilot signal.

9. A digital FM stereo demodulator for demodulating a stereo composite signal including a pilot signal,

comprising:

means for obtaining input samples of the stereo composite signal, the input samples being sampled at a fixed sampling frequency;

means for processing the input samples to obtain internal samples having variable sampling timings;

means for generating a reference signal according to the variable sampling timings;

means for detecting a phase difference between the pilot signal and the reference signal;

means for varying the variable sampling timings according to the detected phase difference; and

means for digitally processing the internal samples to obtain stereo audio data.

10. The digital FM stereo demodulator of claim 9, wherein said means for processing comprises a decimator decimating the input samples with a variable decimation interval, and said means for varying varies the decimation interval.

11. The digital FM stereo demodulator of claim 9, wherein said means for processing comprises an interpolation filter using filter coefficients to perform an interpolation process on the input samples, the internal samples thus being obtained by interpolation, and said means for varying changes the filter coefficients.

12. The digital FM stereo demodulator of claim 11, further comprising a filter coefficient table storing a plurality of sets of filter coefficients yielding interpolated samples interpolated at different temporal distances from a most recent input sample, the plurality of sets including at least a first set of filter coefficients interpolating an internal sample at a shortest of said temporal distances

from the most recent input sample, and a second set of filter coefficients interpolating an internal sample at a longest of said temporal distances from the most recent sample.

13. The digital FM stereo demodulator of claim 12, further comprising a filter operation controller activating said interpolation filter as the input samples are obtained, skipping activation of the interpolation filter when said means for varying changes from the first set of filter coefficients to the second set of filter coefficients, and activating the interpolation filter twice, using both the first set of filter coefficients and the second set of filter coefficients, when the means for varying changes from the second set of filter coefficients to the first set of filter coefficients.

14. The digital FM stereo demodulator of claim 13, wherein the filter operation controller delays activation of the interpolation filter according to said temporal distances from the most recent input sample.

15. The digital FM stereo demodulator of claim 9, wherein said means for digitally processing comprises at least one interpolation filter performing an interpolation process on the internal samples, thereby generating the stereo audio data at regular intervals.

16. The digital FM stereo demodulator of claim 9, wherein said means for digitally processing generates a pilot replica signal from the internal samples, and subtracts the pilot replica signal from the internal samples, thereby canceling the pilot signal.